

ROBOTIC INTEGRATION IN OUR LIVES

Sofia Kulish

*Educational and Research Institute of Nuclear and Heat Power Engineering,
National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”*

Robotic mechanisms have long entered our daily lives and every year they change it more and more. From large industrial machines working in factories to small devices that make our daily lives easier, robots have become an integral part of modern existence.

According to the famous scientist in the field of robotics Rodney Brooks, this science is still in its early stages of development. To bring it to a qualitatively new level, it is necessary for robots to master, at least, perfect skills in recognizing human gestures, fine motor skills, analysis and synthesis of information about the environment, as well as social interaction. The development of new materials, the creation of adaptive software and the improvement of energy sources will make it possible to create more intelligent and functional robots in the near future. For example, thanks to a single digital network and artificial intelligence capable of self-learning, future robots will be able to communicate effectively recognize the emotional state of a person; will have the ability to visually and tactilely recognize animate and inanimate objects; and will also master navigation skills, which will significantly expand their technical capabilities.

Robots and intelligent systems are increasingly becoming a part of our everyday lives. According to Gartner, by 2020, 25 percent of customer service and support operations expecting to be handled by AI technologies, especially chatbots – a significant rise from less than 2 percent of online customer interactions in 2017.

This trend extends beyond business applications to personal daily routines. Today, many people use smart household devices that take over routine chores – from robotic vacuum cleaners to intelligent coffee machines. Digital assistants like Siri and Alexa help users find information, place orders, and manage smart home devices. The advancement of such technologies shows no sign of slowing down, as consumer interest continues to grow. In the near future, cognitive technologies will play an even greater role in supporting human health and well-being. We are likely to see an increase in robots that assist people with disabilities or illnesses, as well as companion robots like Rudy, which provide care and safety for the elderly.

Artificial intelligence is also a kind of robot that develops daily, thousands of users turn to the chat GPT, Gemini, Capilot, etc., AI gives advice, analyzes information, and essentially contains a large database in itself, which is why people turn to it with trust, and people also cause this development with their requests. You can just look at another AI model such as Sora, which makes incredibly realistic videos from just one user request. Although back in 2023 it was quite easy to recognize AI from low-quality images or videos that were quite absurd. And in just a couple of years AI has developed so far.

Robotics and artificial intelligence play a crucial role in advancing digital healthcare and greatly enhancing the quality of medical services. Robotic systems have become indispensable assistants to surgeons, allowing for highly precise and minimally invasive procedures that shorten patients' recovery periods. AI-powered chatbots and virtual consulting tools support the growth of telemedicine, while other intelligent systems can perform accurate diagnostics by analyzing patients' medical records and data from wearable devices. The potential of intelligent technologies in healthcare is vast, as they make medical care more efficient, accessible, and accurate.

References:

1. Metinvest. (2021, November 8). Development of robotics: The future has already arrived. Metinvest-SMC. Retrieved from <https://metinvest-smc.com/ua/articles/razvitie-robototexniki-budushee-uzhe-nastupilo/>
2. SaM Solutions. (2025, June 9). How artificial intelligence and robotics change

our lives. Retrieved from <https://sam-solutions.com/blog/ai-and-robotics-impact-on-our-lives/>

3. Ukrainian IT news. (2024, July 21). The impact of robots on the modern world: Industry, medicine, transportation and everyday life. Retrieved from <https://ittnews.kiev.ua/yak-roboty-zminiuiut-nash-svit-vid-promyslovosti-do-pobutu-2773/>